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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 4

Complete if Known

Application Number	To be assigned 04 10/663174
Filing Date	September 15, 2003
First Named Inventor	John SANTHOFF et al.
Art Unit	To be assigned 2666
Examiner Name	To be assigned Melanie Jagannathan
Attorney Docket Number	30287-111

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
mo		US- 3,668,639	06-06-1972	Harmuth	
mo		US- 3,678,204	07-18-1972	Harmuth	
mo		US- 3,728,632	04-17-1973	Ross	
mo		US- 4,641,317	02-03-1987	Fullerton	
mo		US- 4,979,186	12-18-1990	Fullerton	
mo		US- 5,146,616	09-08-1992	Tang et al.	
mo		US- 5,363,108	11-08-1994	Fullerton	
mo		US- 5,677,927	10-14-1997	Fullerton et al.	
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mo		US- 5,748,891	05-05-1998	Fleming et al.	
mo		US- 5,920,278	07-06-1999	Tyler et al.	
mo		US- 6,002,708	12-14-1999	Fleming et al.	
mo		US- 6,026,125	02-15-2000	Larrick, Jr. et al.	
mo		US- 6,031,862	02-29-2000	Fullerton et al.	
mo		US- 6,178,217 B1	01-23-2001	Defries et al.	
mo		US- 6,275,544 B1	08-14-2001	Aiello et al.	
mo		US- 6,281,784 B1	08-28-2001	Redgate et al.	
mo		US- 6,505,032 B1	01-07-2003	McCorkle et al.	
mo		US- 6,539,213 B1	03-25-2003	Richards et al.	

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)			
mo		WO 01/39451 A1	05-31-2001	Multispectral Solutions, Inc.	
mo		WO 01/93434 A2	12-06-2001	XtremeSpectrum, Inc.	
mo		WO 02/31986 A2	04-18-2002	XtremeSpectrum, Inc.	

Examiner Signature	Melanie Jagannathan	Date Considered	5/27/05
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Filing Date	September 15, 2003
First Named Inventor	John SANTHOFF et al.
Art Unit	To be assigned 2666
Examiner Name	To be assigned Melanie Jo
Attorney Docket Number	30287-111

Sheet	2	of	4
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U. S. PATENT DOCUMENTS

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FOREIGN PATENT DOCUMENTS

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**Examiner
Signature**

Melanie Tugant

Date
Considered

5/28/05

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		Application Number	To be assigned 10/663174		
		Filing Date	September 15, 2003		
		First Named Inventor	John SANTHOFF et al.		
		Art Unit	To Be Assigned 2606		
		Examiner Name	To be assigned Melanie Jagannathan		
Sheet	3	of	4	Attorney Docket Number	30287-111

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
ms		DI WU, PREDRAG SPASOJEVIC, IVAN SESKAR, "Multipath Beamforming UWB Signal Design Based on Ternary Sequences", 40th Annual Allerton Conference, August 26, 2002, WINLAB, Rutgers University, Camden, New Jersey, USA	
ms		HENNING F. HARMUTH, "Applications of Walsh functions in communications", IEEE Spectrum, November 1969, pgs. 82-91, USA.	
ms		ROBERT FLEMING, CHERIE KUSHER, "Integrated, Low-Power, Ultra-Wideband Transceivers for Distributed Position Location and Communication", Semi-Annual Technical Report Contract J-BFI-94-058, Aether Wire & Location, Inc. July 1995, Nicasio, CA, USA.	
ms		ROBERT FLEMING, CHERIE KUSHER, "Low-Power, Miniature, Distributed Position Location and Communication Devices Using Ultra-Wideband, Nonsinusoidal Communication Technology", Semi-Annual Technical Report Contract J-BFI-94-058, Aether Wire & Location, Inc. July 1995, Nicasio, CA, USA.	
ms		FERNANDO RAMIREZ-MIRELES, ROBERT A. SCHOLTZ, "N-Orthogonal Time-Shift-Modulated Codes for Impulse Radio", Report from Joint Services Electronics Program Contract F 49620-94-0022, CTMC 1997, IEEE Wireless 98, July 1998, USA.	
ms		FERNANDO RAMIREZ-MIRALES, "On Performance of Ultra Wideband Signals in Gaussian Noise and Dense Multipath", Paper 99C265, Accepted for Publication in the IEEE Transactions on Vehicular Technology, USC Ultralab, USA.	
ms		ROBERT A. SCHOLTZ, P. VIJAY KUMAR, CARLOS J. CORRADA-BRAVO, "Signal Design for Ultra-wideband Radio", Department of Electrical Engineering, University of Southern California, Los Angeles, CA, USA.	
ms		MOE Z. WIN, ZORAN A. KOSTIC, "Impact of Spreading Bandwidth on Rake Reception in Dense Multipath Channels", IEEE Journal on Selected Areas on Communications, Vol. 17, No. 10, pages 1794-1806, October 1999, USA.	
ms		MOE Z. WIN, GEORGE CHRISIKOS, NELSON R. SOLLENBERGER, "Performance of Rake Reception in Dense multipath Channels: Implications of Spreading Bandwidth and Selection Diversity Order", IEEE Journal on Selected Areas on Communications, Vol. 18, No. 8, pages 1516-1525, August 2000, USA.	
ms		HENNING F. HARMUTH, "Frequency-Sharing and Spread-Spectrum Transmission with Large Relative Bandwidth", IEEE Transactions on Electromagnetic Compatibility, Vol. EMC-20, No. 1, February 1978, USA.	

Examiner Signature	Melanie Jagannathan	Date Considered	5/27/05
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		Application Number	To be assigned 101663174
		Filing Date	September 15, 2003
		First Named Inventor	John SANTHOFF et al.
		Art Unit	To Be Assigned 2661
		Examiner Name	To be assigned Melanie Jagannathan
Sheet 4 of 4	Attorney Docket Number	30287-111	

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
ms		MULTISPECTRAL SOLUTIONS, INC., "Revision of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems" September 12, 2000	
ms		ANNA SCAGLIONE, "Differential Direct Sequence Spread Spectrum for Ultra-Wideband Low power Wireless Microsystems", University of New Mexico, Dept. of EECE, Albuquerque, NM, USA.	

Examiner Signature	Melanie Jagannathan	Date Considered	5/27/05
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